

Capturing Sentiments via Customer Intelligence

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Turn hereSM



Which is positive?



ira
service
needed
helpful
good
office
make
retirement
annuity
application
work
information
plan
orders
effort
question

wife
told
customer
minutes
answer
hold
hour
handle
min
trade
option
request
money
call
talk

Business Problem



- How can we identify customers' sentiment (positive or negative) from their opinions?
- How accurately can we capture that sentiment?
- How can we apply that new knowledge within the business?

Application:

- Direct customer outreach
- Identify influential customers
- Customer Retention
- Identify associates who are mentioned by customers in positive or negative ways



**“No, I’m not angry at you, sir.
I’m angry at the random act of fate
that directed your call to my extension.”**

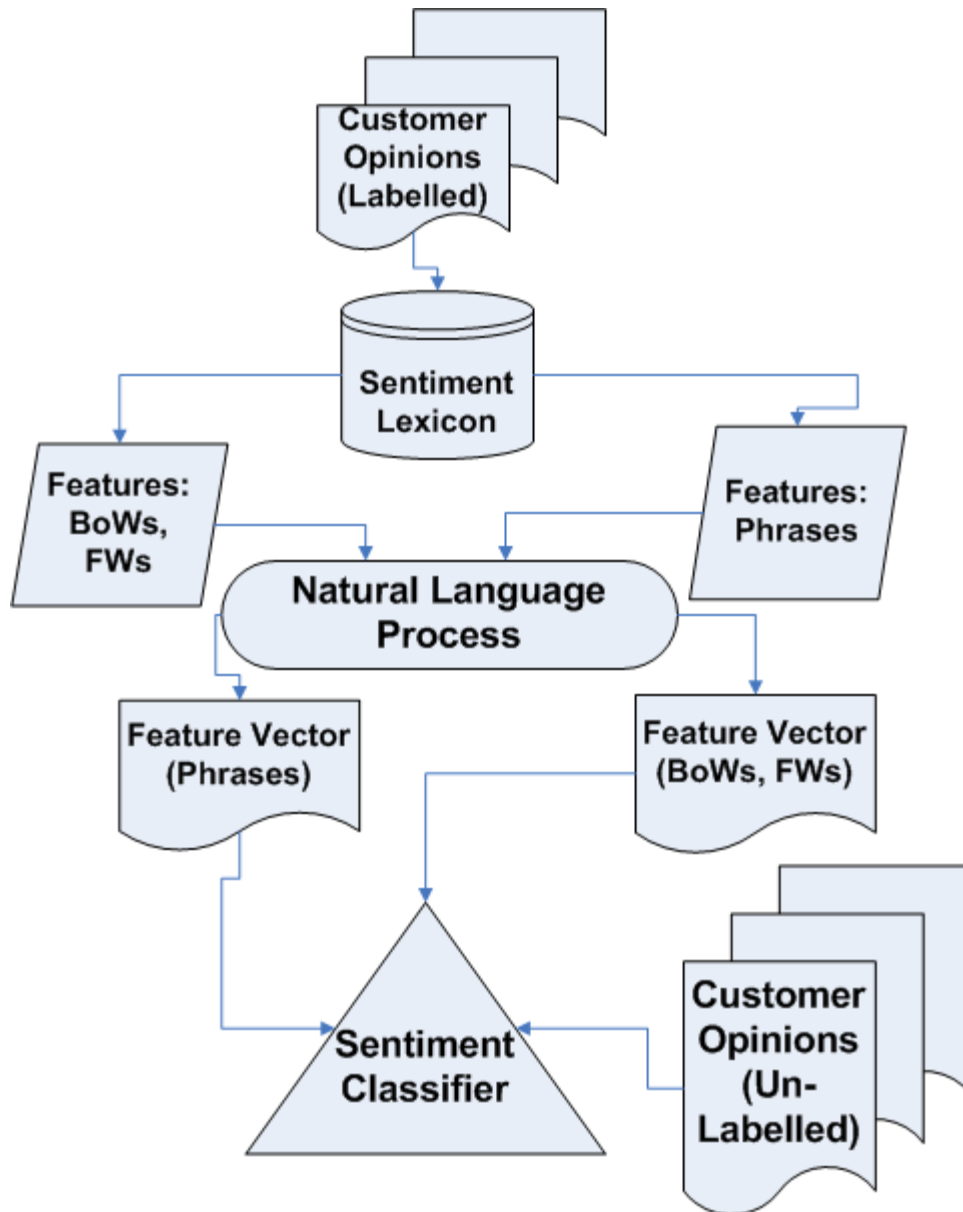
Data Collection (Customer Intelligence)



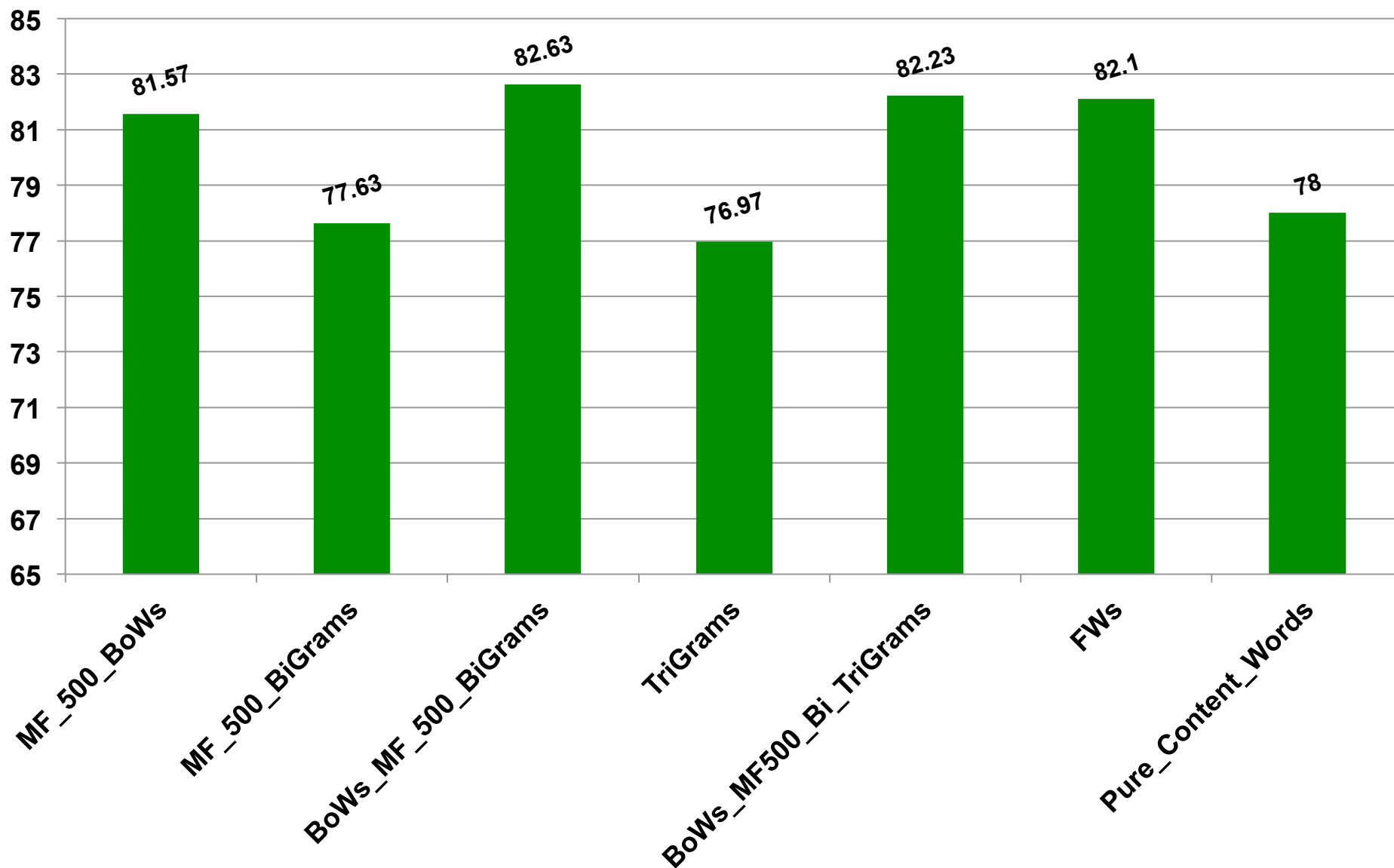
- ❑ Reviews from VoC data sets
- ❑ Column Selection, Scrubbed the data, Generated Metadata
- ❑ Came up with Binary values for “Loyalty Change Classification”
- ❑ Tagged Metadata : Review File Name, #Words, Loyalty Label
- ❑ Sentiment Dictionary
 - 380 positive (consists 3 reviews together from same category)
 - 380 negative (consists 3 reviews together from same category)

 - 411 positive and 411 negative (using neutral treated as negative)

Sentiment Classification



Sentiment Accuracy (%)



Top Positive Words, Phrases



	Top Features
BoWs	i, had to, to do, it was, effort, and, the, question , sign , so i, look, or, help, there, us, was a, my, service , as, the person , to make, good , needed, hold for, email, very , to know, it took, we, require , required , been, me, so, plan, know, him, was, how, resolve, after, the rep , fax, and i, application , to get, account , sure, forms, was very
Phrase (2 words)	was a, had to, to do, it was, was very , and i, so i, of my, to know, the phone , it took, that i, needed to, how to, and a, put forth, phone call , i needed, get to, time to, of the, problem was , helped me , to put, to have, my question , in the, very helpful , took a, did a
Phrase (3 words)	i had to, i needed to, to deal with, was very helpful , a new account , to have a, the information i , had to be, on my account , i have had, a call back, i am still, to go to, transfer me to , to transfer me , needed to do, was looking for, i was looking, the first time, to complete the , was able to, to change my, be able to , i was able , i got a, to do it, it was not, to the rep , i want to

Top Negative Words, Phrases



	Top Features
BoWs and Phrase	<p>no, call, too, on, hold, info, answer, up, when, who, to a, two, i have, still, contact, even, are, said, solve, online, request, hour, for a, were, she, direct, then, they, min, trade, representative, told, branch, let, on hold, an, is, handle, of a, buy, the representative, do, take, web, what, and the, clear, all the, different</p>
Phrase (2 words - bigrams)	<p>to a, on hold, did not, for a, the representative, tried to, he was, a rep, to call, it is, my accounts, an hour, would be, the first, i have, when i, the letter, with a, to transfer, get a, be a, hold time, the problem, i could, the right, my bank, the call</p>
Phrase (3 words - trigrams)	<p>I called back, I spoke with, I talked to, I tried to, I was on, amount of time, did not have, had to call, had to wait, hold for a, me that I, me to a, not able to, on hold for, on the line, resolve the problem, take care of, that I had, to call a, to call back, to get an, to speak to, to talk to, was not able, was on hold, was trying to, what I wanted, when I called, with a representative</p>

Reviews



Your representative, YYYYYY, **was very helpful**, and provided the shares reach their destinations, I could not be more pleased . But, because of the identity theft, I wanted to have maximum security (opening **a new account** now, that my financial adviser could use next week when he starts)

After trying for several days to reach my broker about starting a trading account I contacted **the person** that handles my managed account who took care immediately and my broker conatcted me and solved the request . **I had to** think about my financial position and goals so that we could intelligently discuss them, make decisions about them and act on those decisions . No comment, thanks .

The first rep **I spoke** with was **not** very knowledgeable regarding Institutional class shares of **another** fund family's offerings & gave incorrect advice - I had to continue questioning to obtain the correct answer . She didn't seem to have much experience with basic questions as to fund availability & didn't check her initial answer until I asked her to - she was wrong . Second rep was more knowledgeable and helpful .

Goals Revisit



- ❑ With demographics (Age/Gender/Segmentation) as Dimensions (Entity recognition from dictionary approach)
 - Making Direct Customer Outreach
 - Separating customers from segmentation
 - Identify customer need more effectively
 - Understanding the specific customer requirement

- ❑ All these lead to Customer Retention and subsequently increase reputation in the market place